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PATENT SPECIFICATION

NO DRAWINGS

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1,142,148

48



PATENTS ACT 1949

SPECIFICATION NO. 1,142,148

In accordance with the Decision of the Principal Examiner, acting for the Comptroller-General, dated 3 June 1970 this Specification has been amended under Section 14 in the following manner:-

Page 1, line 15, *after* "employed" *delete* "comma"

Page 1, *delete* lines "16.17. and 18" *insert* "in conventional rubber-based adhesive plasters cause allergic reactions on the skin in a significant number of cases, and it is an object of the"

Page 1, line 24, *after* "invention," *insert* "which comprises a woven or other web coated on one side with a permanently tacky or non-drying rubber based adhesive,"

Page 1, line 33, *after* "plaster" *insert* ", which comprises a woven or other web coated on one side with a permanently tacky or non-drying rubber based adhesive,"

Page 2, lines 66 and 81, *after* "plaster" *insert* "which comprises a woven or other web coated on one side with a permanently tacky or non-drying rubber-based adhesive,"

Page 2, line 81, *delete* "with"

Page 2, line 95, *after* "plaster" *insert* "comprising a woven or other web coated on one side with a permanently tacky or non-drying rubber-based adhesive,"

THE PATENT OFFICE
10 July 1970

R 125520/6

SPECIFICATION NO. 1,142,148

INVENTOR: KATHERINE MARISELL

By a direction given under Section 17 (1) of the Patents Act 1949 this application proceeded in the name of EDWARD TAYLOR LIMITED, a British Company, of Monton Fields Road, Monton, Eccles, Manchester, Lancashire.

THE PATENT OFFICE

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PATENTS ACT 1949

SPECIFICATION NO. 1,142,148

The following corrections were allowed under Section 76 on 28 September 1970.

Page 2, line 81 *delete* 'with' *insert* 'having'

THE PATENT OFFICE
18 June 1971

R 3231/16

POOR QUALITY

PATENT SPECIFICATION

NO DRAWINGS

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Index at acceptance:—A5 R 83 U

Int. Cl.:—A 61 115/06

COMPLETE SPECIFICATION

Adhesive Plaster

- I, KATHERINE MAUNSELL, a British subject, of 53 Wimpole Street, London, W.1, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—
- The present invention relates to adhesive plasters, suitable for use in surgical and other dressings.
- Adhesive plaster normally consists of a woven or other web coated on one side with a permanently tacky or non-drying adhesive material suitable for application to the skin. The adhesive materials commonly employed, which may be based on rubber or other elastomeric substance, provoke an allergic reaction in some patients, and it is an object of the invention to provide an adhesive plaster which inhibits inflammatory reactions due to constituents of adhesive plasters and is therefore more suitable than conventional plasters for use on sensitive patients.
- In the plaster according to the invention, the adhesive coating contains a corticosteroid, preferably in the form of dispersed particles, at least at the exposed surface of the adhesive coating. For reasons of economy in the use of the corticosteroid, it is at present preferred that the steroid should be confined to a layer on the exposed surface of the adhesive. Equally satisfactory results can, however, be obtained by incorporating the corticosteroid in the adhesive composition.
- The invention also provides a method for the production of an adhesive plaster suitable for patients who are allergic to conventional plasters, the method comprising applying a dispersion or solution of a corticosteroid in a volatile liquid medium to the exposed surface of the adhesive coating of a previously prepared plaster, and allowing or causing the medium to evaporate. The preferred method of application is in the form of an atomised spray, although other coating techniques can be employed.
- This method has the advantage that it does not interfere with the well-established manufacture of conventional plaster, but can be added as a final stage in such manufacture whenever it is desired to produce a quantity of plaster according to the invention.
- The preferred corticosteroid is triamcinolone, although other corticosteroids such as prednisone and hydrocortisone may also be applied to or incorporated in the adhesive coatings of plasters, in accordance with the invention. With the preferred material, satisfactory results are achieved with a superficial application, by spraying, of 2—10 mg. of triamcinolone acetonide per square foot of the adhesive coating of conventional plaster. The minimum application required for satisfactory inhibition of inflammatory reaction varies with the sensitivity of the individual patient, and a maximum is set by the requirement that the adhesive qualities of the plaster should not be appreciably reduced. In practice, the amount of corticosteroid applied to or incorporated in the adhesive coating should be so chosen that the plaster can be used without reaction on substantially all sensitive patients.
- Plasters according to the invention have been tested on patients sensitive to conventional plasters, and it has been found that plasters according to the invention can be left in position for several days at least, without an allergic reaction occurring. No sensitivity reactions toxic or side-effects attributable to the absorption of the corticosteroid through the skin have been observed in these tests.
- The following are some examples of the preparation of an adhesive plaster according to the invention.
- A piece of adhesive plaster two inches in diameter, having a conventional adhesive coat-

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ing, was sprayed with an aerosol spray of a composition containing triamcinolone acetone, halquinol and alcohol in a highly volatile liquid medium, the amount of spray being such as to liberate 0.2 mg. of the triamcinolone, although only some 80% of this settled on the surface of the adhesive coating.

In tests carried out with the treated plaster neither toxic side-effects nor any sensitivity reaction to the corticosteroid have yet been observed. In these tests the plaster has remained for several days on patients allergic to conventional plasters, without the development of any inflammatory allergic reaction on the skin.

Since the oral dose of triamcinolone is 2—4 mg. per tablet, an area of about 30—60 square inches of treated plaster would be required before the equivalent of one oral dose was present. It should be also remembered that the oral dose is given daily, whereas the plaster in many cases may not be changed more often than once a week.

The spray employed in the above example is sold under the Trade Mark "Remiderm", and contains 4.95 mg. triamcinolone acetone and 31.2 mg. halquinol in 75 g. spray. The halquinol (an antibacterial and antifungal agent) does not appear to play any useful part in the present invention. The spray also contains 5.8% by weight alcohol, to dissolve the triamcinolone, and it is believed that the presence of this alcohol as a solvent may be beneficial for the purposes of the invention.

In a second example, a sample of conventional adhesive plaster two inches square was sprayed with sufficient "Remiderm" to liberate 0.1 mg. triamcinolone acetone, again about 80% of the spray falling on the adhesive coating. In tests on three sensitive patients, the same degree of protection was afforded as with the application of 0.2 mg. of the steroid to a similar area of plaster.

In a third example, halquinol was not present. An area of two inches square of the adhesive coating of a conventional plaster was sprayed with a spray containing 3.3 mg. triamcinolone in 50 g. liquid, with 4.7% by weight alcohol, and sold under the trade

name Adcortyl A (the word "Adcortyl" is a Trade Mark). An application of 0.2 mg. of the steroid gave the same inhibition of inflammatory reactions as with the "Remiderm" spray.

Although toxic side-effects from triamcinolone have been observed after oral use of 2—4 mg. three times daily over periods of many months, toxic side-effects from the use of normal quantities of plaster treated as described above are not to be expected, especially in view of the relatively infrequent changing of plaster in normal circumstances.

WHAT I CLAIM IS:—

1. Adhesive plaster of which the adhesive coating contains a corticosteroid at least at the exposed surface of the coating.
2. Adhesive plaster according to claim 1 in which the corticosteroid is in the form of dispersed particles.
3. Adhesive plaster according to claim 1 or 2 in which the corticosteroid is triamcinolone.
4. Adhesive plaster according to claim 3 in which the adhesive coating has a superficial application of 2—10 mg. per square foot of triamcinolone acetone.
5. Adhesive plaster substantially as described in any of the three examples herein.
6. A method for the production of adhesive plaster with reduced tendency to provoke sensitivity reactions which comprises applying a dispersion or solution of a corticosteroid in a volatile liquid medium to the exposed surface of the adhesive coating of a previously prepared adhesive plaster and allowing or causing the medium to evaporate.
7. A method according to claim 6 in which the corticosteroid is triamcinolone.
8. A method according to claim 7 in which triamcinolone acetone is applied in an amount of 2—10 mg. per square foot of adhesive coating.
9. A method for the production of adhesive plaster substantially as described in any of the three examples herein.

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